



how to small budget big prints

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Opening word

This work came out of a semester-long exploration of possibilities to make as large prints as possible for as little money as possible, with the intent to put them outside, in public space.

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I explain everything in three parts, that will take you through designing, printing and finalization.

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The example print I made for explaining this process was also designed as a canvas, so that someone else can intervene with it and give it a meaning. A meme, turned into a tool.

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To follow this step-by-step handbook, you only need free, web-based softwares and cheap or easily obtainable tools.

Part 1 Design & Print

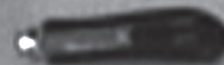
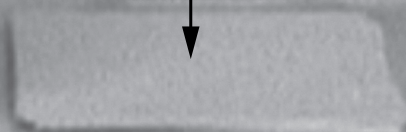


For the designing part, I'll be using Figma. Not because I like it (this is my first time using it actually), but because it's free, web browser based and has all the tools we need to use. It's really easy to navigate through and when something doesn't work, it's easy to look it up. And it's still not bought by Adobe.

When it comes to printing, remember that there's always ways to go cheap. Use a printer you have at your school, your workplace or at home, if you have one.

Things you will need for the upcoming steps:

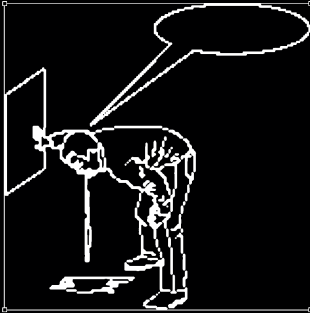
- 1 Stick glue
- 2 Boxcutter knife (optional)
- 3 Laptop
- 4 A4 papers
- 5 Printer (any kind)



- 1 Open [Figma.com](https://www.figma.com), create an account and create a new design file.



- 2 Design or drag in any image, text, or any other thing you want to print out large.



- 3 Click on a frame icon (top left corner of your screen).



- 4 On the right side of your screen, frame options will appear. Click on paper, select A4.

It will then spawn somewhere on the design board.



Design	Prototype
Frame	
▸ Phone	
▸ Tablet	
▸ Desktop	
▸ Presentation	
▸ Watch	
▼ Paper	
A4	595 × 842
A5	420 × 595
A6	297 × 420
Letter	612 × 792
Tabloid	792 × 1224

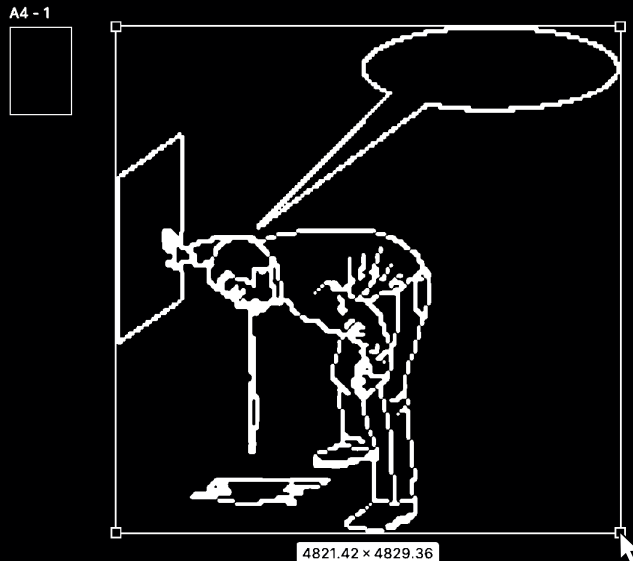
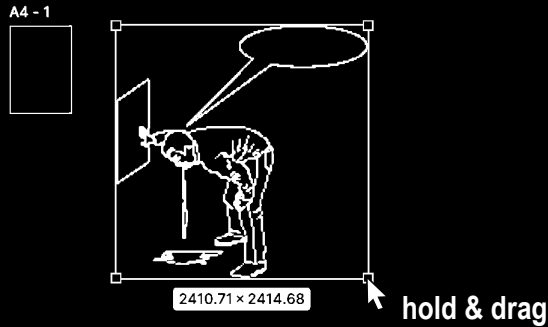
- !! Do not scale the A4 frame. It can cause troubles with the printing later. If you do it by mistake, delete it and spawn a new A4.

Now you can see how big your design is, compared to the size of A4. Scale your design to the size you want to have it printed in.

If you want to work with exact measures, you can use the “Unit Converter & Frame Creator plugin” by Krutik
www.figma.com/community/plugin/1252900857172369864

It will allow you to create a frame of any size in centimeters, which you can then use as a comparison to scale your design similarly.

- 5 To scale your design proportionally, hold **Shift** while dragging the border.



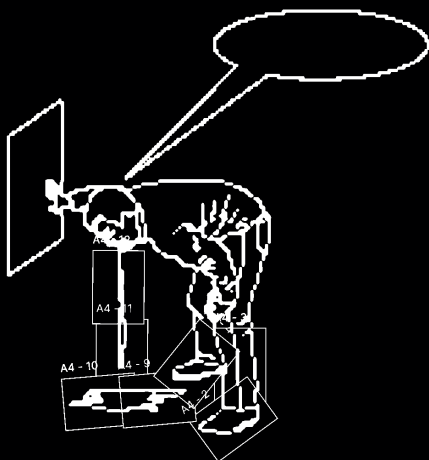
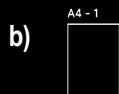
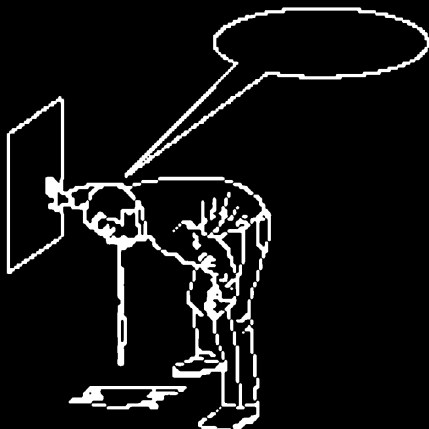
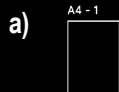
- 6 When your design has a size you like, drag its layer on the very top and lock it. This way you will not mistakenly move it around later.



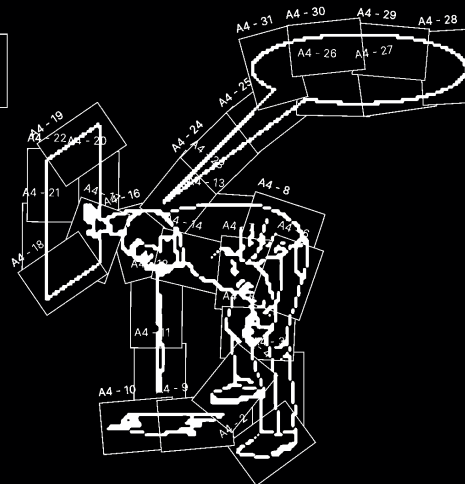
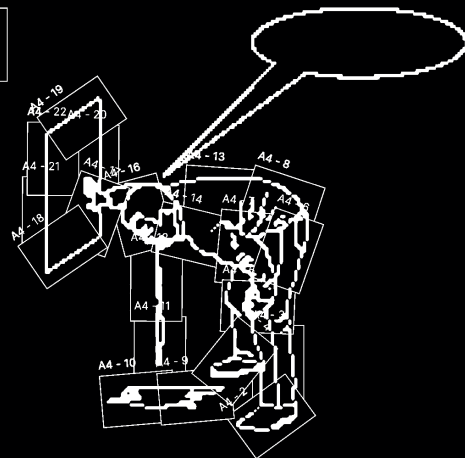
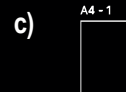
Now it's time to lay out A4 frames onto the design. Those will later serve as separate pages of PDF.

Start copying the A4 you have created a while ago under the design to fill it around completely, so there's no empty spot on the design without paper beneath it. Feel free to rotate the A4s, change their colors, do anything you want, just don't change their size.

7 Use copy and paste to fill your design around with A4 frames like so. They need to be all around the design.

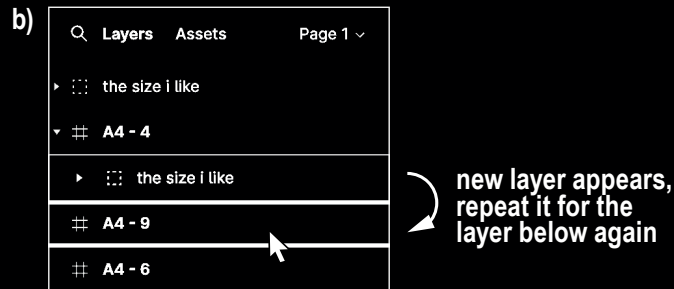
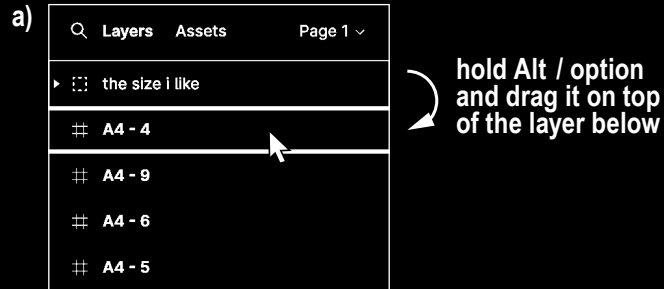


!! Make sure the frames overlap—that's where you will glue them together to make them one big poster.



When you've underlaid your design with A4 frames everywhere, you have the most time consuming part behind you. Now you'll have to map the design into each of these frames, which is annoying, but doesn't take more than a few minutes.

- 8 Hold Alt (Windows) or Option (Macbook) and drag your design layer INSIDE of the frame layer beneath it. Repeat this with every other frame layer. Keep holding Alt or Option, to mask the design into each frame.



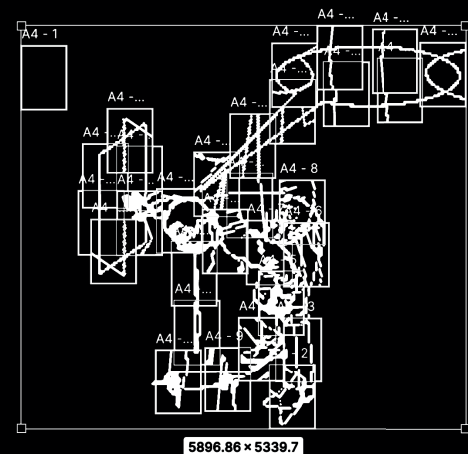
Repeat this process over and over again, until you mask the design into every A4 frame layer you have created. Doing 104 layers took me about 4 minutes.

After this, the document is almost ready to be exported. Now you need to check for the rotation of the A4 frames. For a successful export, they all need to have a 0 degree rotation, otherwise they will be unprintable.

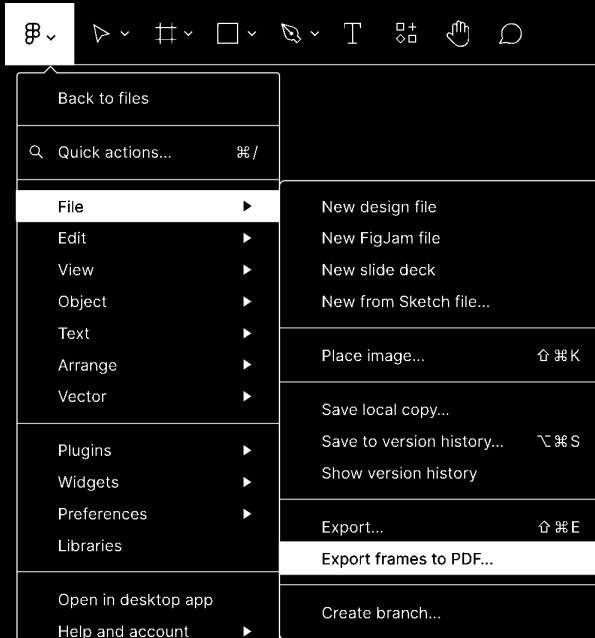
- 9 Select all layers and check for the rotation properties on the right side of your screen. If it says 0, you're good to go, if it says Mixed, just set it to 0.



Your design will look messy after this step.
It's ok.



- 10 Once your design is masked into all frames and all frames have a 0 degree rotation, you can export the final print data. Click on the Figma logo in the top left corner (next to an arrow, frame and other tools), select File > Export frames to PDF...



This will download a PDF file that you can use for printing.

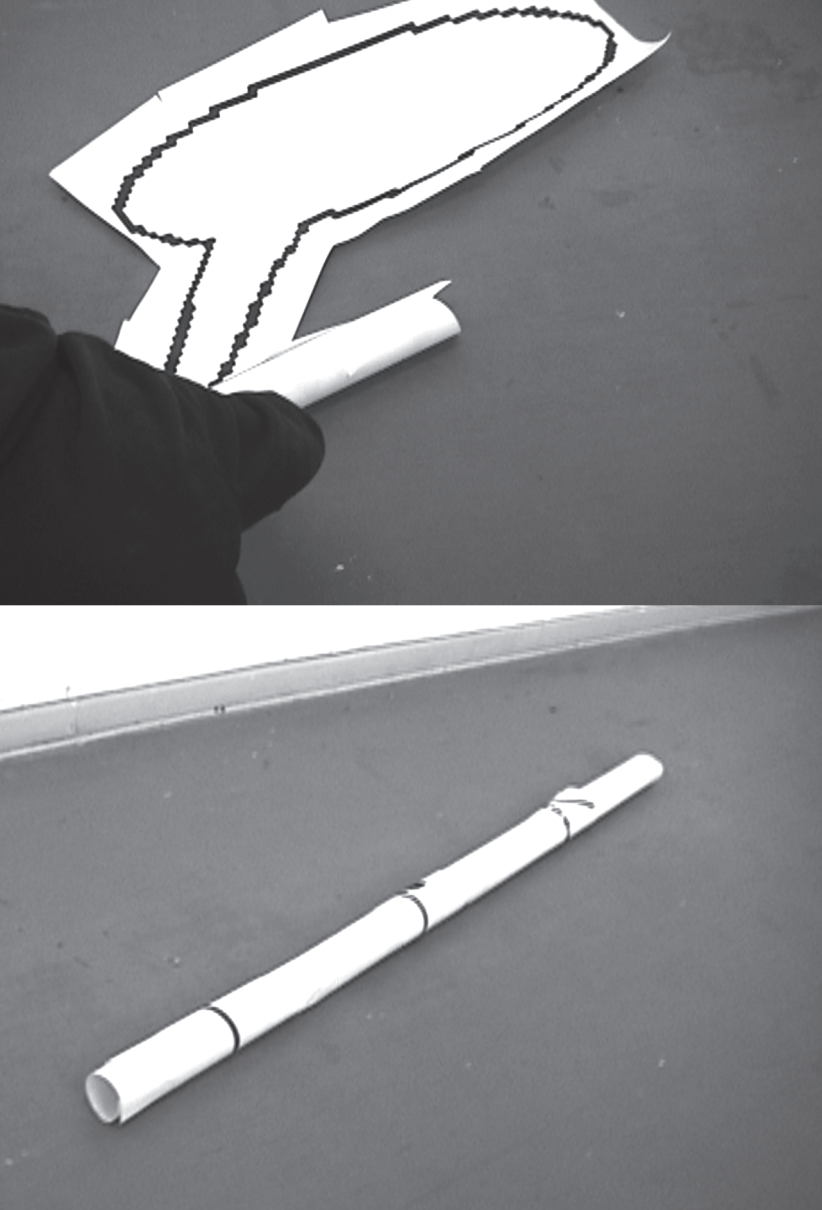
- !! Some printers don't take PDFs exported from Figma and only print out blank pages. If this happens to you, use a PDF compressor. There's many out there, I used sejda.com/flatten-pdf, no account needed, for free.

Part 2 Pre-glue

This part is very self-explanatory.
After printing out the papers, lay them on the ground.
You will need a space as big as your design is.
If you want, cut off the borders that didn't get printed.
If it's a complicated design, try dividing it into parts.
Finally, glue it together with a glue stick into one big thing.
Then, to move around easier, roll your pre-glued print.

It helped me to find two papers with the same part of the design, putting these two papers on a window (the light will help you see where it overlaps) and gluing it there. If you repeat this with all the papers that carry similar parts of the design, it gets much easier to put it all together in the end.





Part 3 Paste and Party

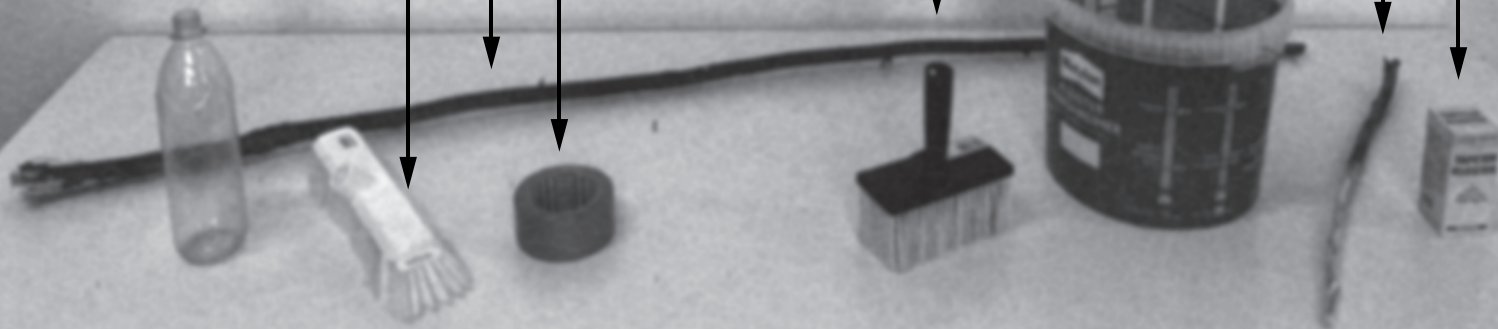
This will explain how to put your poster outside.

It sadly requires you to visit your local hardware store (OBI, Bauhaus, whatever) to get a powder wallpaper glue and a wallpaper brush. I chose to do it this way myself, because of the limited time frame this work had.

If you want, you can also try a second way, which only uses household items (water, fine flour, cooking pot, broom brush) and things you can find around you. It's called Wheat paste – look it up.

Things you will need for the upcoming steps:

- 1 Wallpaper paste
- 2 Stick for stirring paste
- 3 Bucket
- 4 Wallpaper brush (option 1)
- 5 Broom brush (option 2)
- 6 Duct tape
- 7 Long stick (height extension)
- Sealable bottle (optional)



- 1 First, prepare the paste itself. Put cold water in your bucket, I did about 2 litres, but it depends on how much paste you want.

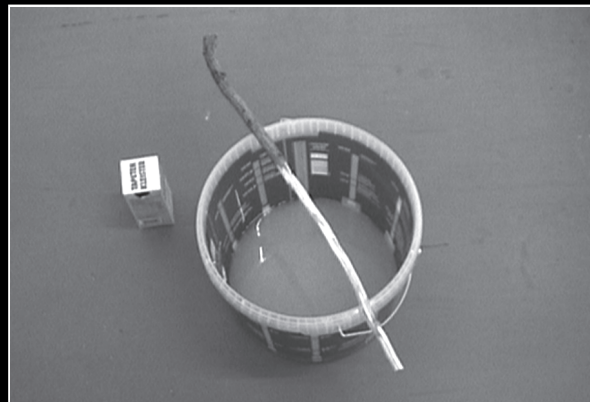


- 2 Pour the paste powder into the water while stirring. Either follow the mixing ratio on the packaging, or guess. I guessed, and it also worked.



- 3 After stirring for about 3 minutes, let it stand for about 15 minutes. The powder will dissolve, then you can see how thick it turned out. If it's too watery, add powder while stirring. If it's too thick, add water.

The final consistency should be similar to a syrup, or warm honey. Easy to pour, hard to spill.



Then it's ready to use. If you don't want to carry a bucket around, pour the paste in a sealable bottle with a wide opening.

I personally prefer using a bucket, as it's easier and faster to grab glue from. With a bottle, you need to pour the glue onto the brush, instead of being able to dip it in, which is time consuming, as you will need a lot of glue to put up a big print.

- 4 In the next step, extend the height of your brush, if you want to put your poster in hard to reach places. I personally didn't use it, but might come handy. It's self-explanatory again—just get a stick, and tape the brush to it, so it holds firmly.



- 5 With everything being prepared, it's time to put the print outside. Find a place you like, look for smooth surfaces and walls without harsh texture.



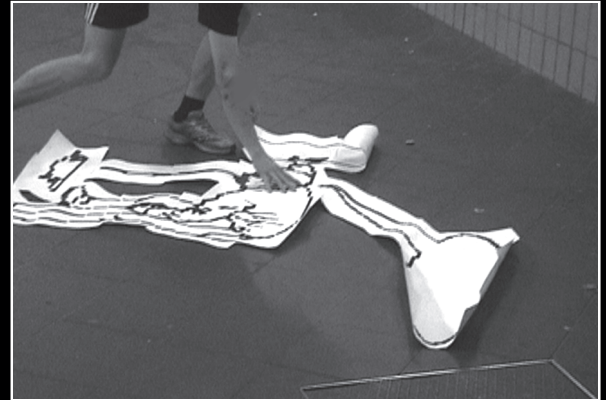
Think twice about where you place your print.
Always avoid going over graffiti, tags included.

Look for clean walls, Amazon boxes,
or billboards with shitty advertisement.

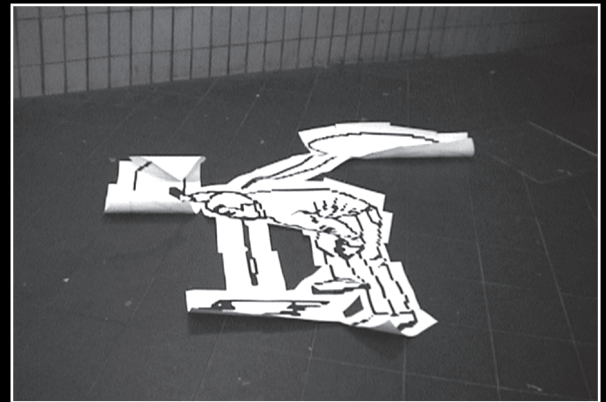
Never go over other people.

- 6 Unroll your print and place it somewhere on the ground, so you can see how big it actually is.

a)



b)



- 7 Spread the paste on the surface on spots you think the print will be at. It's better to do more than less. Mixing more paste is easier than making a new print.



- 8 Place the print on top of your paste layer. Start from the middle and spread it out with your hands. It should hold there, if not, just add more paste.



- 9 Take your brush and add another paste layer on top of your print. Put a lot of it, the paper should be soaked. It will have enough time to dry out until morning.



- !! There's definitely some air bubbles under the paper. Squeeze them out to the sides with your brush, don't be afraid to use force, the paper can take it.



In the end, there shouldn't be any part of paper hanging off.

After 12 hours, I went to check if it's still there and if, as I hoped from the beginning, someone already wrote something inside of the bubble or the empty poster.



So with this, the project comes to a successful end.

PDF file of this handbook:

bit.ly/SmallBudgetBigPrints

Money I spent to make this handbook and its content:

• Paper	€4	didn't use all of it
• Stick glue	€3	didn't use all of it
• Wallpaper brush	€6,5	endless use
• Wallpaper paste	€3,5	didn't use all of it
• Rest of the things	free	just use things laying around, print at uni, ...
<u>Total</u>	<u>€17</u>	with enough to do more